

REMARKS

Claims 1-7 and 11-20 are currently pending in the present application. No amendment to the claims is made in this response to the Office Action.

Applicants respectfully request reconsideration of each of the pending claims based on the following comments.

Claim Rejections under 35 U.S.C. § 103(a)

In the Final Office Action dated October 31, 2007, claims 1-3 and 11-19 have been rejected under 35 U.S.C. § 103(a) as being obvious over “the admitted prior art” (APA) in view of Fujiki U.S. Patent '094 (U.S. Patent No. 5,438,094), Simizu U.S. Patent '140 (U.S. Patent No. 4,216,140) and Takuman EP '211 (European Published Application No. 1 225 211 A2). Further, claims 1-7 and 11-20 have been rejected under 35 U.S.C. § 103(a) as being obvious over APA in view of Tsuji EP '702 (European Published Application No. 0,764,702), Takuman EP '211 and Simizu US '140. Further, in the Advisory Action dated February 14, 2008, the obviousness rejection has been maintained while citing new references (i.e., Ichikawa U.S. '495 (U.S. Patent No. 6,501,495) and Murakami U.S. '339 (U.S. Patent No. 6,372,339)).

Applicants respectfully traverse. Reconsideration and withdraw of the rejections is respectfully requested based upon the following considerations.

Non-Obviousness over the Cited References

As recited in claim 1, the present invention employs an inorganic filler (iv) which employs an aluminum hydroxide powder or an aluminum hydroxide powder and at least one reinforcing or non-reinforcing filler selected from the group consisting of silica, titanium dioxide, calcium silicate, ferric oxide and carbon black.

The Examiner states that the present invention is obvious over the combination of the cited references (the APA, Fujiki US '094, Shimizu US '140, Takuman EP '211 and Tsuji EP '702).

However, Takuman EP '211 and Shimizu US '140 disclose aluminum hydroxide. On the other hand, Fujiki US '094 and Tsuji EP '702, which are newly cited in the Office Action,

disclose alumina. It is noted that aluminum hydroxide is represented by the chemical formula $\text{Al}(\text{OH})_3$ and alumina is represented by the chemical formula Al_2O_3 . Thus, aluminum hydroxide is clearly distinguished from alumina since their molecular structures and crystalline structures are different from each other.

Therefore, there is no basis for a motivation to one skilled in the art to combine Fujiki US '094 or Tsuji EP '702 disclosing alumina together with either Takuman EP '211 or Shimizu US '140 disclosing aluminum hydroxide in an attempt to obtain the present invention. All of these references fail to disclose the inorganic filler (iv) as recited in the present claims.

Unexpected Results

In addition to the above, the present invention exhibits unexpected, advantageous properties. The Examples (present invention) and Comparative Examples as described in the instant specification evidence the advantageous properties exhibited by the present invention. For example, the composition of Comparative Example 2 contains an increased amount of fumed silica (Component G) as compared with compositions of Examples 1-5 (present invention) and Comparative Example 1, but does not contain aluminum hydroxide powder. In Comparative Example 2, even though an increased amount of fumed silica is employed, peel strength and cohesive failure properties are poor, compared to Examples 1-5. Note Table 1 at page 15 of the instant specification. Moreover, the inflation test adhesion property is poor even if more fumed silica is employed in Comparative Example 2. On the other hand, the present invention, which employs aluminum hydroxide, exhibits excellent properties with respect to peel strength, cohesive failure and inflation test adhesion.

In connection with the above explanation regarding the unexpected results, it is stated at page 2, line 20 to page 3, line 9 of the Advisory Action dated February 14, 2008, as follows:

Applicant additionally contends that the present invention exhibits unexpected, advantageous properties. However, Table 1 does not provide a conclusive showing of unexpected results. In particular, Examples 1-5 include different amounts of aluminum hydroxide powder and different amount of fumed

silica, as compared to Comparative Example 2. Thus, it is unclear if any realized benefits are a result of the specific combination of inorganic fillers and/or the specific amounts of inorganic fillers (individual amounts or total amounts). For example, it is unclear if any benefits would be realized if Comparative Example 2 included the same amount of total inorganic filler (56 pbw) as Example 1. This rationale is equally applicable to Comparative Example 1. It is further noted that additional experiments using different combinations of inorganic fillers (e.g. silica and aluminum oxide) might provide a conclusive showing of unexpected results for the claimed combination (as defined in independent claim 1). (Emphases added)

Pursuant to the suggestions of the Examiner, Applicants have provided the 37 CFR § 1.132 Declaration of a co-inventor, Mr. Hiroyasu Hara, which is enclosed with the instant submission. From the experimental data in the 132 Declaration, it is evidenced that:

- 1) benefit is realized even if Comparative Example 2 includes the same amount of total inorganic filler (56 parts by weight (pbw)) as Example 1 (benefit 1); and
- 2) benefit of the claimed combination (e.g. aluminum hydroxide and fumed silica) is realized, even compared to different combinations of inorganic fillers (e.g. aluminum oxide and fumed silica) (benefit 2).

Regarding the second issue, for the Examiner's convenience, relevant data in Table I of the 132 Declaration is summarized in Table II below.

Table II

Components (pbw)	Comparative Example		Example
	3	4	1
A-1	0	0	<u>35</u>
A'-1	0	<u>35</u>	0
G	<u>56</u>	<u>21</u>	<u>21</u>
Total Amount (A-1, A'-1 and G)	<u>56</u>	<u>56</u>	<u>56</u>
Peel strength (N/cm)	2.9	3.0	6.0
Cohesive failure (%)	85	85	100
Elongation at break (%)	900	950	1100
Inflation test adhesion	NG	NG	OK

A-1 : Aluminum HydroxideA'-1 : Aluminum Oxide

G : Fumed Silica

Benefit 1

In Comparative Example 3 as described in the 132 Declaration, the same amount of inorganic filler (56 pbw of fumed silica ("G" in Table I)) is contained as Example 1, where 35 pbw of aluminum hydroxide ("A-1" in Table I) and 21 pbw of fumed silica ("G" in Table I) (total 56 pbw) is contained. Further, Comparative Example 3 employs the same components in the same amounts as Comparative Example 2 as described in the instant specification except the increased amount of fumed silica (i.e., 56 pbw). Namely, Comparative Example 3 also shows whether any benefits are realized if Comparative Example 2 includes the same amount of total inorganic filler (56 pbw) as Example 1.

As shown in Table II, even Example 1 and Comparative Example 3 contain the same amount of total inorganic filler (i.e., 56 pbw), Example 1 (the present invention) exhibits much better properties in peel strength, cohesive failure, elongation at break and inflation test adhesion, than Comparative Example 3.

Benefit 2

In Comparative Example 4 in the 132 Declaration, the same amount of inorganic filler (56 pbw of fumed silica ("G" in Table I)) is contained as Example 1. However, Comparative Example 4 contains 35 pbw of aluminum oxide ("A'-1" in Table I) instead of 35 pbw of aluminum hydroxide. As shown in Table II, even though Example 1 and Comparative Example 4 contain the same amount of total inorganic filler, Example 1 (i.e., combination of aluminum hydroxide and fumed silica) exhibits much better properties in peel strength, cohesive failure, elongation at break and inflation test adhesion, than Comparative Example 4 (combination of aluminum oxide and fumed silica).

As explained above, it is evident, from the data of the 132 Declaration and the Examples and Comparative Examples in the instant specification, that the use of aluminum hydroxide alone or in combination with the specific reinforcing or non-reinforcing filler such as fumed silica as (iv) an inorganic filler, as recited in the claims, can attain excellent properties in adhesion (e.g., peel strength, cohesive failure and inflation test adhesion), as compared with the use of fumed silica alone or in combination with aluminum oxide (alumina).

Accordingly, even if a *prima facie* case of obviousness has been properly alleged, such obviousness has been rebutted by the evidence of unexpected, advantageous properties discussed above.

In view of the above, the present invention patentably defines over the cited references. Applicants respectfully request that the Examiner withdraw the above rejections.

CONCLUSION

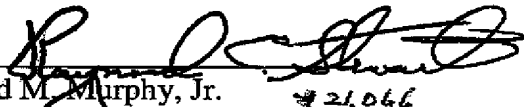
In view of the above amendment and comments, Applicants respectfully submit that the claims are in condition for allowance. A notice to such effect is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gerald M. Murphy, Jr., at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 
Gerald M. Murphy, Jr. #21,066
Registration No.: 28,977
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

Attachment: Declaration under 37 C.F.R § 1.132 of Mr. Hara